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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,431	03/25/2004	Paul J. Ruthven	02734.0495-02000	6967
22852	7590	04/24/2006		
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER HUG, ERIC J	
			ART UNIT	PAPER NUMBER
			1731	

DATE MAILED: 04/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/808,431	Applicant(s) RUTHVEN ET AL.	
	Examiner Eric Hug	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-68, 104-111, 113 and 114 is/are pending in the application.
- 4a) Of the above claim(s) 104-111 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-68, 113 and 114 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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The following is in response to the amendment filed on February 2, 2006.

Specification/Drawings

The replacement drawings received on February 2, 2006 are acceptable. The amendment to the specification reflecting drawing changes is acknowledged. No new matter has been added.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-4, 7-9, 15, 26, 27, 30-32, 38, 48, 52, 55-57, and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hepford et al (US 3,940,529) in view of Schutte et al (US Re.27,453).

Hepford discloses a system for joining and perforate embossing a two-ply web utilizing two embossing rolls having perforating embossing elements (knuckles) which can be arranged in the cross-machine direction, i.e. at 90° to the machine direction. See in particular column 4, lines 19-35 which explains how the web is perforated when the two plies are joined together. The rises on one ply are situated between the rises of the other ply and bonding is by mechanically joining the slopes between the trough and the top of the rises. This mechanical junction results in local sheet perforation. The embossing elements depicted are oval, beveled, and in half-step alignment, and having a sidewall angle less than 20°. See Figures 3 and 4 for the shape, arrangement, and engagement of embossing elements. The embossing elements of the embossing

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rolls are disclosed in the example of column 5, line 56, as having a height of .021 inches (21 mils), set to interfere with each other to a depth of .015 inches (15 mils).

Schutte is incorporated by reference into Hepford (see column 4, lines 35-38 of Hepford). Hepford relies in part on Schutte to show that the perforating embossing elements can be arranged in the cross-machine direction. Schutte discloses an embossed absorbent paper towel formed by passing a fibrous web between two embossing rolls having embossing elements. The rolls are designed to compress portions of the surface of the web and also to stretch the web between the compressed areas beyond the elastic limit of the fibers, thereby separating the fibers and increasing the web porosity in the stretched areas. As a result, apertures appear (column 3, lines 53-70). Schutte shows in the figures that embossing elements are oriented in both the machine direction and the cross-machine direction. Thus, the embossing elements of Schutte comprise perforate nips arranged in the cross-machine direction (CD), and it would be obvious to one skilled in the art that at least some of the embossing elements of Hepford can be arranged in the cross-machine direction. Figure 3 of Hepford shows all the embossing elements oriented in one direction, thus it also would be obvious to arrange all the embossing elements in the cross-machine direction.

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Claims 5, 6, 10-14, 16-25, 28, 29, 33-37, 39-47, 49-51, 53, 54, 58-62, 64-68, and 114 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hepford et al (US 3,940,529) in view of Schutte et al (US Re.27,453) as applied to claims 1, 26, and 48 above, and if necessary further in view Bauernfeind (US 4,759,967).

Hepford discloses a system for joining and perforate embossing a two-ply web utilizing two embossing rolls having perforating embossing elements (knuckles) which can be arranged in the cross-machine direction as suggested by Schutte. Neither Hepford nor Schutte discloses all of the claimed shapes, heights, sidewall angles, and engagement lengths of the embossing elements.

Bauernfeind discloses embossed tissue products having elongated embossments oriented in the cross-machine direction (CD) of the sheet. The embossing device comprises two rolls having mating embossments. Bauernfeind teaches that it is desirable to have substantially all of the embossing elements oriented in the CD of the sheet. Suitable elongated embossing shapes given by Bauernfeind include ovals, rectangles, diamonds, polygons, or any other suitable shapes. Figure 3 shows the embossments in full-step alignment. Embossing element dimensions are given in the examples (starting at column 3, line 55), some of which reads on the claimed depths and engagement lengths.

Thus, Bauernfeind teaches element shape, alignment, and engagement for two embossing rolls having CD oriented embossing elements. It is therefore considered that the claimed shapes and dimensions of the embossing elements, if not expressly disclosed by the above references, are obvious modifications thereof one skilled in the art would recognize as depending on the

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nature of the web being embossed. For example, Schutte teaches in column 3, lines 53-57, that the clearance of the embossing elements must exceed the thickness of the base stock.

The claimed shapes are also unpatentable in view of *In re Dailey*, 149 USPQ 47 (CCPA 1976), where it held that change in form or shape is an obvious engineering design.

Claim 113 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hepford et al (US 3,940,529) in view of Schutte et al (US Re.27,453) as applied to claims 1, 26, and 48 above, and further in view of Bredenick et al (US 5,458,950). With regards to two portions of embossing elements having different heights of at least 15 mils, this feature is taught expressly by Bredenick, who discloses webs having light and heavy embossing perforations. The embossing is performed using two embossing rolls having perforate embossing elements of two different heights. The use of two types of embossments provides for a balance between web strength and web absorbency. At the time of the invention it would have been obvious to one skilled in the art to modify Hepford to provide two types of perforate embossments for the same reasons.

Response to Arguments

Applicant's arguments filed February 2, 2006 have been fully considered.

The rejections set forth above are substantially the same as presented previously. They have been modified to indicate that the drawings of Schutte show both machine-direction and cross-machine perforate nips, rather than showing at least 50% cross-direction perforate nips. Applicant has argued this point persuasively.

Regarding Applicant's arguments that the examiner has not established a prima facie case of obviousness, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. In this case, there is sufficient disclosure in the references themselves to suggest the claimed invention. Column 4, lines 32-38 of Hepford states:

"Perforating the webs increases flexibility or softness of the web and also increases extensibility of the web, an advantage which is particularly useful when it is in the cross-machine direction of the web. U.S. Pat. No. Re 27,453, which is hereby incorporated by reference into the specification, discloses advantages of perforating the web in this manner." (emphasis added).

The examiner contends that "it" refers to the perforating rather than the advantages obtained therefrom.

The examiner acknowledges the subsequent disclosure in Hepford is directed to mainly perforations in the machine direction. However, it is felt that this disclosure is merely a detailed

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description of this one particular embodiment, not a teaching away from other embodiments.

Schutte is incorporated into Hepford is to show that certain advantages can also be obtained by perforating in the cross-machine direction. Also, in column 1, line 31 to column 2, line 31, Hepford discloses that a problem with Schutte is the nesting of multiple plies, which is prevented by Hepford by the arrangement of the embossing elements. Thus, Hepford does not teach away from perforating in the cross-machine direction, but rather shows advantages of perforating in one direction. It would be readily envisioned that the teachings of Hepford and Schutte would lead one to orienting perforations only in the cross-machine direction to obtain advantages arising therefrom with a reasonable expectation of success.

Applicant's arguments do not clearly point out any other patentable novelty which is present in the dependent claims in view of the state of the art disclosed by the references.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

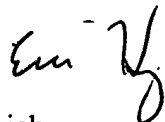
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 571 272-1192.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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